



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,187	02/17/2004	Andrew P. Nguyen	6601.P041	1768

8791 7590 09/20/2005

BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD
SEVENTH FLOOR
LOS ANGELES, CA 90025-1030

EXAMINER

TADESSE, YEWEBDAR T

ART UNIT	PAPER NUMBER
----------	--------------

1734

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/781,187

Applicant(s)

NGUYEN, ANDREW P.

Examiner

Yewebdar T. Tadesse

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-24 and 26-37 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-11, 18-20 and 33-37 is/are allowed.
- 6) ☒ Claim(s) 1,2,4-8,12-17,21-24 and 26-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claims 1-2, 4-8, 12-17, 21-24 and 26-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claims 1, 12 and 21; lines 10-11, 11-12 and 14-15 respectively applicants claim, "the lip is angled such that an inner portion of the lip is higher than an outer portion of the lip. It is unclear with respect to what element the two portions of the lip are compared. It is noted, in the specification, paragraph 18, page 9, lines 10-12, applicants teach "In cross-section, the top lip 62 may be angled such that an inner portion of the upper surface 66 is higher than an outer portion of the upper surface above the plane". For the purpose of examination "the lip is angled such that an inner portion of the lip is higher than an outer portion of the lip above the plane" is assumed.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 1734

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 4-8, 12-17, 21-24 and 26-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Nagamine (US 2002/0053319).

As to claim 1, Nagamine discloses (see Fig 6) a semiconductor substrate processing apparatus comprising a frame (15); a semiconductor substrate support (chuck 71) to support a semiconductor substrate (W), the semiconductor substrate having a central axis; a dispense head (90,91 and 100) connected to the frame to dispense a semiconductor processing fluid onto the semiconductor substrate; and a catch cup section attached to the frame having an inner surface and an outer surface (cup 70 having outside and inside surface, in the inside section items 75 and 84 included), at least a portion of the inner surface (see a portion of plate 84) not facing towards the central axis of the semiconductor substrate (W), wherein the catch cup further comprises a lip (75) extending from the inner surface thereof towards the central axis of the semiconductor substrate, and wherein the lip is angled such that an inner portion of the lip is angled such that an inner portion of the lip is higher than an outer portion of the lip above the plane (see drawing of Fig 6 below for the inner and outer surfaces of the cup).

As to claim 2, a line normal to and extending away from the portion of the inner surface (a line normal to the inner surface of 84) does not intersect the central axis of the semiconductor substrate (see Fig 6).

With respect to claims 4-7, the lip (item 84 or 75) comprise an upper surface and a lower surface and at least a portion of the upper surface or lower surface of the lip facing away from the central axis or a line normal to the upper or lower surface of the lip (item 84 or 75) does not intersect the central axis of the semiconductor substrate (see Fig 6).

As to claim 8, in Nagamine (see Fig 6) the catch cup (70) further comprises at least two drain openings (82) and a passageway (bottom portion 77) interconnecting the at least two drain openings (82).

As to claim 12, Nagamine discloses (see Fig 6) a semiconductor substrate processing apparatus comprising a frame (15); a semiconductor substrate support (chuck 71) to support a semiconductor substrate (W), the semiconductor substrate having a central axis; a dispense head (90,91 and 100) connected to the frame to dispense a semiconductor processing fluid onto the semiconductor substrate; and a catch cup section (sections of cup 70) attached to the frame around the semiconductor substrate support having an upper surface (item 75) facing towards the central axis of the semiconductor substrate.

As to claim 13, in Nagamine the substrate has a surface in a plane.

With respect to claims 14-15, in Nagamine (see Fig 6) most of the catch cup (70) sections are provided below the plane and no portion of the upper surface (item 75) of the catch cup is parallel to the plane.

As to claims 16-17, in Nagamine (see Fig 6) a peak formation extends from the upper surface (at the tip of the bent part of the 75), dividing the upper surface inner and

Art Unit: 1734

outer portions, the inner portion of the upper surface facing toward the central axis of the substrate (W), and the outer portion of the upper surface facing away from the central axis of the substrate; or a line normal to and extending only away from the inner portion of the upper surface of the (bent part of 75) intersects the central axis of the semiconductor substrate and a line normal to and extending only away from the outer portion (of bent part 75) of the catch cap does not intersect the central axis of the substrate.

As to claim 21, Nagamine discloses (see Fig 6) a semiconductor substrate processing apparatus comprising a frame (15); a semiconductor substrate support (chuck 71) to support a semiconductor substrate (W), the semiconductor substrate having a central axis; a dispense head (90,91 and 100) connected to the frame to dispense a semiconductor processing fluid onto the semiconductor substrate; and a catch cup having a mid-section and a top-section (sections of 70), the mid section attached to the frame around the semiconductor substrate support (see item 75 on the right side attached to the frame close to the substrate) having an upper surface (item 75) facing towards the central axis of the semiconductor substrate, the top section attached to the frame (the top area where item 84 is attached to the frame through supporting member 106 around the mid-section) and having an inner surface (inside and outside surfaces of item 84), at least a portion of the inner surface of item 84 facing away from the central axis of the substrate, wherein the catch cup further comprises a lip (75) extending from the inner surface thereof towards the central axis of the semiconductor substrate, and wherein the lip is angled such that an inner portion of the

lip is angled such that an inner portion of the lip is higher than an outer portion of the lip above the plane.

As to claim 22, in Nagamine the substrate has a surface in a plane.

With respect to claim 23, in Nagamine (see Fig 6) no portion of the upper surface (the bent part of the 75) of the catch cup is parallel to the plane.

As to claim 24, a line normal to and extending only away from the inner surface of the top section (of item 84) of the catch cap does not intersect the central axis of the substrate (see Fig 6).

As to claim 26, in Nagamine (see Fig 6) a peak formation extends from the upper surface (at the tip of the bent part of the 75), dividing the upper surface inner and outer portions.

With respect to claims 27-29, the lip of the top section (tip of 84) comprise an upper surface and the inner portion of the top surface of the mid section (item 75) facing towards the central axis of the substrate (W), and the outer portion of the upper surface facing away from the central axis of the substrate; or a line normal to and extending only away from the upper surface of the lip (tip 84) do not intersect the central axis of the semiconductor substrate (see Fig 6).

As to claim 30, a line normal to and extending only away from the inner portion of the top surface of the mid-section of the catch cup (item 75) intersect the central axis of the substrate and a line normal to and extending only away from the outer portion of the top surface of the mid-section (of 75) of the catch cap does not intersect the central axis of the substrate (see Fig 6).

With respect to claims 31-32, at least a portion of the lower surface of the lip (tip 84) of the top section of the catch cup faces away from the central axis of the substrate and a line normal to and extending only away from the lower surface of the lip (tip 84) of the top section of the catch cup does not intersect the central axis of the substrate (see Fig 6).

Allowable Subject Matter

5. Claims 9-11, 18-20 and 33-37 are allowed.

Response to Arguments

6. Applicant's arguments filed 07/08/2005 have been fully considered but they are not persuasive. Applicants mainly argue that Nagamine does not teach a lip angled such that an inner portion of the lip is higher than an outer portion of the lip. Examiner disagrees. As shown in Fig. 6 (see below) Nagamine discloses an angled lip (75) having an inner portion of the lip is higher than an outer portion of the lip above the plane (the arrows pointing the sections of the portions, whereat the inner portion of the lip is higher than the outer portion of the lip above the plane).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 1734


the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yewebdar T. Tadesse whose telephone number is (571) 272-1238. The examiner can normally be reached on Monday-Friday 8:00 AM-4: 30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Fiorilla can be reached on (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


YTT


CHRIS FIORILLA
SUPERVISORY PATENT EXAMINER
Au 1734